Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this Application:

Listing of Claims:

1. (Previously presented) A stent adapted for location exteriorly of an ascending aorta of a patient, characterised by the stent being customized and pre-formed in such manner as to be locatable around and in morphological relationship with said ascending aorta, said stent having a size and shape which morphologically matches the morphological profile and contour of the ascending aorta and means for maintaining the stent in such relationship with the ascending aorta, wherein said stent supports the exterior of the ascending aorta in substantially full contact therewith.

2. (Original) A stent according to claim 1 characterised in that the stent is in the form of a sleeve in at least two parts, the sleeve being of generally cylindrical form.

3. (Previously presented) A stent adapted for location exteriorly of a blood vessel of a patient, characterised by the stent being customized for the patient and pre-formed in such manner as to be locatable around and in morphological relationship with said blood vessel, said stent having a size and shape which morphologically matches the morphological profile and contour of the blood vessel and means for maintaining the stent in such relationship with the blood vessel, wherein said stent supports the exterior of the blood vessel in substantially full contact therewith and the stent is formed of a sleeve, said sleeve includes one or more sections of varying form in order to conform to the morphological requirements in any particular case.

4. (Previously presented) A stent according to claim 2 characterised in that the sleeve is provided with appropriately located recesses or apertures for accommodating other interconnecting arteries.

5. (Previously presented) A stent adapted for location exteriorly of a blood vessel of a patient, characterised by the stent being customized for the patient and pre-formed in such manner as to be locatable around and in morphological relationship with said blood vessel, said stent having a size and shape which morphologically matches the morphological profile and contour of the blood vessel and means for maintaining the stent in such relationship with the

blood vessel, wherein said stent supports the exterior of the blood vessel in substantially full contact therewith and the stent is formed of a sleeve which is provided with a base or flange portion for attachment to a main heart structure, such that a securement or anchor point is established for the stent, the base or flange portion being adapted for appropriate attachment to the said structure.

6. (Previously presented) A stent according to claim 2 characterised in that the interconnection of the parts of the sleeve is effected by a hinge mechanism with releasable latches provided at the mating edges of the parts.

7. (Previously presented) A stent according to claim 2 characterised in that the sleeve is of resilient material slit longitudinally to allow it to be expanded over the wall of the artery and then to recover its original condition, the sleeve being suitably clampable in position embracing the artery in the said morphological relationship.

8. (Original) A stent according to claim 7 characterised in that the clamping is achieved by the application of suitable ties.

9. (Original) A stent according to claim 8 characterised in that the sleeve is provided with one or more grooves for receiving and locating the ties.

10. (Original) A stent according to claim 7 characterised in that the clamping is effected by the insertion of a locking pin extendable through hinge elements provided at the mating edges of the slit in the sleeve.

11. (Previously presented) A stent according to claim 5 characterised in that the sleeve of the stent is of varying thickness with the greatest thickness being provided in the base or flange region thereof.

12. (Original) A stent according to claim 11 characterised in that the thickness reduces away from the base or flange region to afford a degree of flexing given the need to accommodate the pulsing of the blood through the artery.

13. (Previously presented) A stent according to claim 2 characterised in that the sleeve has an outer casing and a relatively inner casing, the outer casing being of more rigid construction than the inner casing which latter is configured to provide flexure.

14. (Original) A stent according to claim 13 characterised in that the inner casing is of petal-like form to encompass the artery but to allow flexing.

15. (Canceled).

16. (Canceled).

17. (Canceled)

18. (Canceled).

19. (Canceled).

20. (Previously presented) A stent according to claim 1 characterised in that the material from which the stent is produced is translucent for the purposes of allowing non-intrusive investigative procedures to take place.

21. (Previously presented) A stent according to claim 1 characterised in that the material from which the stent is produced is resistant to the effect of electro-magnetic fields.

22. (Previously presented) A stent according to claim 1 characterised in that the material from which the stent is produced is thermally stable and is biocompatible.

23. (Canceled).

24. (Previously presented) A stent according to claim 1 characterised in that the material from which the stent is made is polymeric, metallic, or ceramic or appropriate mixtures thereof.

25. (Currently amended) ~~A stent according to claim 1~~ A stent adapted for location exteriorly of an ascending aorta of a patient, characterised by the stent being customized and pre-formed in such manner as to be locatable around and in morphological relationship with said ascending aorta, said stent having a size and shape which morphologically matches the morphological profile and contour of the ascending aorta and means for maintaining the stent in such relationship with the ascending aorta, wherein said stent supports the exterior of the ascending aorta in substantially full contact therewith characterised in that the material from which the stent is made is a heat shrink plastics material recoverable in terms of shape either immediately or over a period of time to produce the morphological fit.

26. (Previously presented) A stent according to claim 1 characterised in that the size of the stent is adjustable in situ.

27. (Previously presented) A method of manufacturing a stent for morphologically fitting an ascending aorta, the method characterised by the steps of producing a 3D computerised model from a scanned image of the ascending aorta to which the stent is in practice to be applied, and rapid prototyping the computerised 3D model in an appropriate material to provide the stent or a mould for the stent or a precursor thereof for morphologically matching the blood vessel by conforming morphologically to the contour of the ascending aorta of the patient and supporting the exterior of the ascending aorta in essentially full contact therewith.

28. (Original) A method according to claim 27 characterised in that the scanned image is obtained from a procedure selected from the following: MRI, MRA, X-ray CT, 3D pulsed Doppler Echo imaging or an equivalent of any one of the foregoing.

29. (Previously presented) A method according to claim 27 characterised in that the computerised 3D model is generated using computer-aided design software.

30. (Previously presented) A method according to claim 27 characterised in that the computerised 3D model is employed in the rapid prototyping step to generate the stent in the form substantially in which it is to be deployed in a surgical procedure.

31. (Previously presented) A method according to claim 27 characterised in that the computerised 3D model is employed in the rapid prototyping step to generate a precursor to the stent, a mould is taken of the precursor, and the stent is then formed in the mould.

32. (Currently amended) A method of manufacturing a stent for morphologically fitting a blood vessel of a patient to conform morphologically to the contour of the blood vessel to provide a ~~sleeve~~ stent to support its exterior in essentially full contact therewith, the method characterised by the steps of producing a 3D computerised model from a scanned image of the blood vessel to which the stent is in practice to be applied, and rapid prototyping the computerised 3D model in an appropriate material to provide the stent or a mould for the stent or a precursor thereof for morphologically matching the blood vessel, the stent is produced by embroidering the 3D image onto at least one 2D substrate element, and then forming the stent around the blood vessel with the substrate element or substrate elements and fixing them together to provide the stent.

33. (Previously presented) A method of manufacturing a stent for morphologically fitting a blood vessel, the method characterised by the steps of producing a 3D computerised model from a scanned image of the blood vessel to which the stent is in practice to be applied, and rapid prototyping the computerised 3D model in an appropriate material to provide the stent or a mould for the stent or a precursor thereof for morphologically matching the blood vessel, the stent is formed of polymeric material produced to conform morphologically to the 3D image in the form of a thin shell, embroidering a woven structure onto the shell, and removing the shell following completion of the embroidery to provide a stent constituted by the thus produced embroidered structure which is morphologically created thereby.

34. (Currently amended) A method of manufacturing a stent for morphologically fitting a blood vessel of a patient to conform morphologically to the contour of the blood vessel by providing a ~~sleeve~~ stent to support its exterior in essentially full contact therewith, the method characterised by the steps of producing a 3D computerised model from a scanned image of the blood vessel to which the stent is in practice to be applied, and rapid prototyping the computerised 3D model in an appropriate material to provide the stent or a mould for the stent or a precursor thereof for morphologically matching the blood vessel, the stent is formed of polymeric material produced to conform morphologically to the 3D image in the form of a thin shell, the shell is mounted in a computer numerically controlled machine having multiple axes control, and the shell is machined to provide appropriate perforations to accommodate subsidiary blood vessels.

35. (Currently amended) A method of manufacturing a stent for morphologically fitting a blood vessel of a patient to conform morphologically to the contour of the blood vessel by providing a ~~sleeve~~ stent to support its exterior in essentially full contact therewith, the method characterised by the steps of producing a 3D computerised model from a scanned image of the blood vessel to which the stent is in practice to be applied, and rapid prototyping the computerised 3D model in an appropriate material to provide the stent or a mould for the stent or a precursor thereof for morphologically matching the blood vessel, the stent is formed by embroidering a substantially flaccid former representing the 3D morphology of the blood vessel, thereby to generate the stent as a woven structure.

36. (Previously presented) A stent produced by the method according to claim 27.

37. (Currently amended) A stent A stent according to claim 1 wherein the ascending aorta has an aortic root and wherein the ~~sleeve~~ stent provides support and adjustment at the aortic root to reinforce or reinstate a valve seat to prevent leakage of the valve.

38. (Canceled).